

ABSTRACT:

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A lighting device for generating mixed colors is described, which device comprises a light emission surface (11) and a plurality of light sources (21) such as, for example, LEDs of different colors, and which device is suitable in particular for backlighting of liquid crystal displays such as LCD picture screens, or for use as a planar light radiator.

- 5 The lighting device is characterized in particular in that an optical waveguide plate (1) is provided into which a plurality of cavities (20) are recessed, each cavity accommodating a light source (21) and having an upper side (203) which faces the light emission surface (11) and side walls (201), which upper side (203) is coated with a first reflecting layer (204), while the coupling of light into the optical waveguide plate takes place through the side walls
10 (201). A very homogeneous mixing and distribution of the light from each individual light source on the light emission surface is achieved thereby.

Fig. 1

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